

REMARKS

The Applicants thank the Examiner for the very thorough consideration given the present application. Claims 1-20 are now pending in the application. Claims 6, 11, 12, and 19 are canceled. Claims 1-5, 7-10, 13-18, and 20 have been amended. The Examiner is respectfully requested to reconsider and withdraw his rejections in view of the amendments and remarks set forth below.

REJECTION UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

Claims 1-20 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. This rejection is respectfully traversed.

The Examiner has rejected the trademark/trade name FR4 used to identify/describe a dielectric material as being indefinite. Accordingly, Applicants have amended Claims 1-5, 7-10, 13-18, and 20 to delete the trademark/trade name FR4.

Applicants now believe that all pending claims particularly point out and distinctly claim the subject matter of the present invention. Therefore, reconsideration and withdrawal of these rejections are respectfully requested.

REJECTION UNDER 35 U.S.C. § 102

Claims 1-7, 10-16, and 18-20 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Holshouser et al. (U.S. Pat. No. 6,107,970). This rejection is respectfully traversed.

Holshouser et al. is generally directed to an antenna configured for single frequency band operation (Col. 6, lines 30-46 and Figure 5) having a first conductive element 42 that serves as a radiating element configured to resonate within a first frequency band (Col. 5, lines 38-39 and Figure 3), and a second conductive element disposed in spaced-apart relationship with the first conductive element, where the second conductive element is parasitically coupled with the first conductive element and serves as a radiating element configured to resonate within a second frequency band different from the first frequency band (Col. 5, lines 48-55 and Figure 3). As such, the single band antenna of Holshouser et al. requires two conducting elements to achieve dual-band operation.

In contrast, the claimed invention is directed to an antenna configured for dual-band operation by using a single meandering radiating metal line. Specifically, amended independent Claims 1 and 14 now recite a dual-band chip antenna comprising a meandering radiating metal line formed on at least two opposite surfaces of a chip base for generating first and second operating bands. Holshouser et al. fails to teach or suggest an antenna configured for dual band operation by using a single radiating element as claimed.

In view of the foregoing amendments and discussion, Applicants respectfully submit that Claims 1 and 14 are neither anticipated nor obvious over the cited art and in condition for allowance.

Applicants also submit that Claims 2-5, 7-10, and 13 which depend from Claim 1 are likewise now patentable and in condition for allowance. Further, Applicants submit

that Claims 15-18, and 20 which depend from Claim 14 are now patentable and in condition for allowance.

Reconsideration and withdrawal of this rejection is respectfully requested.

REJECTION UNDER 35 U.S.C. § 103

Claims 1-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Park (the Pub No. US 2003/0001793) in view of Holshouser et al. (U.S. Pat. No. 6,107,970). This rejection is respectfully traversed.

Park is generally directed to a chip antenna used in mobile communication terminals, local area networks (LAN) and the like. More specifically, Park's invention relates to a chip antenna in which a vertically bent conductor pattern is formed around a parallelepiped dielectric block so as to make it possible to miniaturize the antenna.

In contrast, the claimed invention is directed to an antenna configured for dual-band operation by using a single meandering radiating metal line. Specifically, amended independent Claims 1 and 14 are directed to a dual-band chip antenna having a first operating band and a second operating band. Throughout the entire specification of Park, no description related to dual-band operation has been disclosed, and the only disclosure relating to the operating frequency band is in Figure 5, wherein only a single band is used for the comparison with the conventional antenna. Park fails to teach or suggest a dual-band chip antenna of the claimed invention.

In addition, amended Claim 14 now includes the limitation that the meandering radiating metal line is about $1/4\lambda$ (wavelength) of a central frequency of a first operating band. Park also fails to teach or suggest this claim limitation.

In view of the foregoing amendments and discussion, Applicants respectfully submit that Claims 1 and 14 are not obvious over the cited art and in condition for allowance.

Applicants also submit that Claims 2-5, 7-10, and 13 which depend from Claim 1 are likewise now patentable and in condition for allowance. Further, Applicants submit that Claims 15-18, and 20 which depend from Claim 14 are now patentable and in condition for allowance.

Reconsideration and withdrawal of this rejection is respectfully requested.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: 4/28/03

By: David P. Utykowski
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2821

HDP/SB/21 based on PTO/SB/21 (08-00)

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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	10/006,474
Filing Date	December 5, 2001
First Named Inventor	Chiu et al.
Group Art Unit	2821
Examiner Name	Hoanganh Le
Attorney Docket Number	7268-000231

Total Number of Pages in This Submission

ENCLOSURES (check all that apply)

☐ Fee Transmittal Form

☐ Fee Attached

☒ Amendment / Response

☐ After Final

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☐ Information Disclosure Statement

☐ Certified Copy of Priority Document(s)

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Parts under 37 CFR
1.52 or 1.53

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Remarks

The Commissioner is hereby authorized to charge any additional fees that may be required under 37 CFR 1.16 or 1.17 to Deposit Account No. 08-0750. A duplicate copy of this sheet is enclosed.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

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or
Individual name

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Attorney Name
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Reg. No.
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Signature

David P. Utykowski

Date

April 28, 2003

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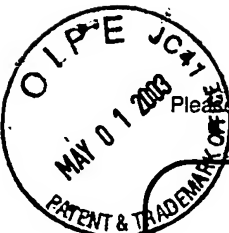
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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

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